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09/538,455	03/30/2000	Yang Xu	1787-06001	8304
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CONLEY ROSE, P.C. P. O. BOX 3267 HOUSTON, TX 77253-3267			CHAMBERS, A MICHAEL	
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Please find below and/or attached an Office communication concerning this application or proceeding.



**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 22

Application Number: 09/538,455

Filing Date: October 9, 2001

Appellant(s): Xu et al

**MAILED**  
**JUL 02 2004**  
**GROUP 3700**

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Robert Gray

For Appellant

**EXAMINER'S ANSWER**

This paper includes a response to a Remand to the Examiner by the BPAI in a decision mailed September 30, 2003 (paper 21) and includes the earlier response by the examiner mailed December 17, 2002 (Examiner Answer - paper 16) to the Appeal Brief filed September 23, 2002 (paper 15). Appellants have provided a copy of an appendix of claims filed August 12, 2003 (paper 19) and the IDS filed November 20, 2000 (paper 3) has been considered and initialed by the examiner.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

No amendment after final has been filed.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct

(7) *Grouping of Claims*

Appellant's brief includes a statement that claims do stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) *Claims Appealed*

No copy of the appealed claims is contained in a Appendix to the brief.

*(9) Prior Art of Record*

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

6,102,068	HIGDON et al	8- 2000
4,846,218	UPCHURCH	7-1989

*(10) Grounds of Rejection*

The following grounds of rejection are applicable to the appealed claims:

Claims 1-12, 20, 21 and 23-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Higdon et al.

Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higdon et al in view of Upchurch.

*(11) Response to Argument*

The previous *rejection under 35 U.S.C. 112, second paragraph*, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants' (appellants) regard as his the invention has been overcome by the addition of "a flow restriction" in claim 1. Claims 1-12, 20, 21, and 23--27 are *rejected under 35 U.S.C. 102(e)* as being anticipated by Higdon et al. Note the

disclosure of a "...stream switching system..." for a chromatograph including a plurality of solenoid valves 98, a sheet heater (column 4, lines 57+), and an insulated hosing (Figure 3B, for example). Contrary to appellants' remarks, the patent to Higdon et al clearly shows a common stream channel (single inlet/multiple outlet 72) valved by a particular solenoid 98. "At least part of the tubing being pre-heated..." by the "sheet heater" (column 4, lines 57+)(claims 1+). The solenoid actuated valves 98 clearly "valve" the "...input and output ports....between an open and closed position." (Claim 9).. The reduced 'tubing size" shown in Figure 3A (claim 18) acts as a restrictor. With regard to claims 19 and 20, note the plurality of input and output port (Figure 3A). No patentable weight was been given to the recitation added to claim 1 by the amendment filed August 14, 2001, in the "restrictions" shown in Figure 1 of Higdon et al would be sufficient to restrict the sample flow to "...about 50-70 cc/min at 15 psig". With regard to claim 9 remarks, claim 9 includes recitation that an "outside impulse (is required) to place said actuatable ports in the open position". This recitation appears to be contrary to "...this forces the pistons into an upward position, resulting in closed ports" remarks in the amendment and the recitation of claim 9 is clearly readable on the solenoid valve 98 operation. Contrary to appellants' remarks, the examiner's statement regarding claim 9 remarks is correct. Higdon et al clearly discloses actuation of the respective solenoid valves 98 to open

the valves and valve the respective ports. The valve 98 clearly controls a plurality any one of which may be considered to a "bleed port".(claim 23). Claims 13-17 are *rejected under 35 U.S.C. 103(a)* as being unpatentable over Higdon et al in view of Upchurch. Higdon et al disclose the claimed invention except for the recitation of a "filter" as taught by Upchurch (Figure 1 ). The plurality of check valves (ball valves) act as "pressure regulators. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the chromatograph system of Higdon et al to include a "cartridge filter" , as taught by Upchurch in order to provide more "pure" fluid to be tested and/or processed. . Further in particular note the disclosure of a filter for the "fluid streams" (column 6, lines 58+) of Higdon et al. Appellants' remarks , drawn to filter disposition, were considered, however, not deemed persuasive. In column 6, lines 58+ both outlet port filters and filters disposed in inlets are disclosed.

*Proper Interpretation of Means plus Function Limitations  
In Claim 25 Following Remand to the Examiner by the Board  
of Patent Appeals and Interferences (BPAI) in a Decision  
Dated September 30, 2003*

In that decision, the BPAI stated that the examiner failed "...to properly interpret the means-plus-function limitations recited in claim 25 consistent with *In re Donaldson*, 16 F. 3d 1189, 1193, 29 USPQ2d 1845, 1848 (Fed. Cir. 1994) (in banc)..". The BPAI stated that "...the examiner has not properly interpreted the claimed means-plus-function limitations as the corresponding structures described in

the specification and the equivalents thereof...not properly considered the disclosure of Higdon et al..." The BPAI remanded the application to the examiner to "...define the structures corresponding to the claimed means-plus-function limitations and the equivalents thereof ...". In the response to arguments included with the examiner's answer dated December 17, 2002, the examiner stated that Higdon et al disclose that ~~at~~ least part of the tubing being pre-heated..." by the "sheet heater" (column 4, lines 57+)(claims 1+). Higdon et al state in that portion of the specification that the sheet heater is included in the cover assembly. They further state that "...the cover assembly includes a main cover 112 with a temperature control regulator 114 on top of it for the purposes of controlling a heater pad e.g. sheet heater...". Clearly, as shown in Figure 1, any sample "...after entering the selector valve 34..." to any of the plurality of tubes 72 would be heated by the "sheet heater" included with the cover assembly. The sheet heater of Higdon et al (A) performs the function specified in the claims, (B) is not excluded by any explicit definition provided in the specification for an equivalent, and is an equivalent of means-plus-function limitation (see MPEP 2183). Appellants' specification includes only that the "means for heating" is a preheat coil (page16) or a silicon rubber heater (page 18). The prior art "sheet heater" of Higdon et al performs the heating function specified in claim 25 "...in substantially the same

manner as the function performed by the corresponding element described in the specification." and clearly meets the means-plus-limitations of claim 25.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

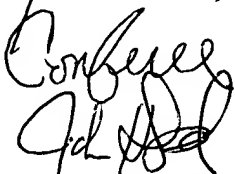


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March 14, 2004



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